Practice Question Set For A-Level
**Subject : Biology**
**Paper-1 Topic: 4 Genetic Info and Variation and Relationships**

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**Name of the Student**:_____
**Max. Marks : 25 Marks** **Time : 25 Minutes**

Mark Schemes

Q1.

| | | |
|---|---|---|
| 21 – 25 | Extended abstract<br><br>Generalised beyond specific context | Response shows holistic approach to the question with a fully integrated answer which makes clear links between several different topics and the theme of the question.<br>Biology is detailed and comprehensive A-level content, uses appropriate terminology, and is very well written and always clearly explained.<br>No significant errors or irrelevant material.<br>For top marks in the band, the answer shows evidence of reading beyond specification requirements. |
| 16 – 20 | Relational<br><br>Integrated into a whole | Response links several topics to the main theme of the question, to form a series of interrelated points which are clearly explained.<br>Biology is fundamentally correct A-level content and contains some points which are detailed, though there may be some which are less well developed, with appropriate use of terminology.<br>Perhaps one significant error and, or, one irrelevant topic which detracts from the overall quality of the answer. |
| 11 – 15 | Multistructural<br><br>Several aspects covered but they are unrelated | Response mostly deals with suitable topics but they are not interrelated and links are not made to the theme of the question.<br>Biology is usually correct A-level content, though it lacks detail. It is usually clearly explained and generally uses appropriate terminology.<br>Some significant errors and, or, more than one irrelevant topic. |
| 6 – 10 | Unistructural<br><br>Only one or few aspects covered | Response predominantly deals with only one or two topics that relate to the question.<br>Biology presented shows some superficial A-level content that may be poorly explained, lacking in detail, or show limited use of appropriate terminology.<br>May contain a number of significant errors and, or, irrelevant topics. |
| 1 – 5 | Unfocused | Response only indirectly addresses the theme of the question and merely presents a series of biological facts which are usually descriptive in nature or poorly explained and at times may be factually incorrect.<br>Content and terminology is generally below A-level. |

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|---|---|---|
| | | May contain a large number of errors and, or, irrelevant topics. |
| 0 | | Nothing of relevance or no response. |

**Commentary on terms and statements in the levels mark scheme**

The levels mark scheme for the essay contains a number of words and statements that are open to different interpretations. This commentary defines the meanings of these words and statements in the context of marking the essay. Many words and statements are used in the descriptions of more than one level of response. The definitions of these remain the same throughout.

| Levels mark scheme word/statement | Definition |
|---|---|
| Holistic | Synoptic, drawing from different topics (usually sections of the specification) |
| A fully integrated answer which makes clear links between several different topics and the theme of the question | All topics relate to the title and theme of the essay; for example, explaining the biological importance of a process.<br>When considering, for example, the importance of a process, the explanation must be at A-level standard.<br>'Several' here is defined as at least four topic areas from the specification covered. This means some sentences, not just a word or two. It does not mean using many examples from one topic area. |
| Biology is detailed and comprehensive A-level content, uses appropriate terminology, and is very well written and always clearly explained. | Detailed and comprehensive A-level content is the specification content.<br>Terminology is that used in the specification.<br>Well written and clearly explained refers mainly to biological content and use of terminology. Prose, handwriting and spelling are secondary considerations. Phonetic spelling is accepted, unless examiners are instructed not to do so for particular words; for example, glucagon, glucose and glycogen. |
| No significant errors or irrelevant material. | A significant error is one which significantly detracts from the biological accuracy or correctness of a described example. This will usually involve more than one word.<br>Irrelevant material is several lines (or more) that clearly fails to address the title, or the theme of the title. |
| For top marks in the band, the answer shows evidence of reading beyond specification requirements. | An example that is relevant to the title and is not required in the specification content. The example must be used at A-level standard. |
| Response mostly deals with suitable topics but they are not interrelated and | Not addressing the biological theme of the essay (eg importance) at A-level |

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| | |
|---|---|
| links are not made to the theme of the question. | standard. |

The importance of interactions **between cells** and between organisms.

Suitable topic areas

- 3.2.1.2 Viruses
- 3.2.4 Cell recognition, immune system, HIV
- 3.3.2 Gas exchange
- 3.3.4.1 Mass transport in animals
- 3.3.4.2 Mass transport in plants
- 3.4.4 Genetic diversity and adaptation
- 3.4.5 Species and taxonomy (courtship behaviour)
- 3.4.6 Biodiversity within a community
- 3.5.3 Energy and ecosystems
- 3.5.4 Nutrient cycles
- 3.6.1.1 Survival and response
- 3.6.1.2 Receptors
- 3.6.2.2 Synaptic transmission
- 3.6.3 Skeletal muscles are stimulated ...
- 3.6.4.2 Control of blood glucose
- 3.6.4.3 Control of blood water potential
- 3.7.1 Inheritance
- 3.7.2 Populations in ecosystems
- 3.7.3 Evolution and speciation
- 3.7.4 Populations in ecosystems
- 3.8.2.3 Gene expression and cancer

In order to fully address the question and reach the highest mark bands students must also include at least four topics in their answer, to demonstrate a synoptic approach to the essay.

Students may be able to show the relevance of other topics from the specification.

Note, other topics from beyond the specification can be used, providing they relate to the title and contain factually correct material of at least an A-level standard. Credit should not be given for topics beyond the specification which are below A-level standard.

**[25]**

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